

REMARKS

Status of the Claims

Claims 1-3 and 5-26 are pending in the present application. Claim 4 is canceled. Claim 22 is withdrawn from consideration as directed to a non-elected invention. Claims 1 and 15 are amended. Support for these amendments is found throughout the specification filed, including, *e.g.*, in original claim 4. Claims 25 and 26 are new. Support for new claims 25 and 26 is found, *e.g.*, in original claims 4, 13, and 15. The claims are amended without prejudice or disclaimer. No new matter is entered by way of these amendments. Reconsideration is respectfully requested.

Issues Under 35 U.S.C. § 102(b)

Claims 1-6, 8-21, 23 and 24 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 7,238,862 to Allison *et al.*, (“Allison”), *see Office Action*, pages 2-4. According to the Examiner, Allison teaches the use of medium enriched with a metal salt containing copper in either step 1, *i.e.*, preparing the plant material and/or step 2, *i.e.*, infecting the plant material with an Agrobacterium, *see Office Action*, page 3, third paragraph. In addition, the Examiner states that the word “enriched” as specified in claim 1 is not defined in the present application. The Examiner interprets the word “enriched” to mean any copper concentration greater than zero, *see Office Action*, page 3, second paragraph. Applicants respectfully traverse.

Initially, Applicants note that Allison was published on August 14, 2003, as U.S. Patent Application No. 2003/0154517. The instant application is a national stage application of PCT Application No. PCT/JP2004/011599, which was filed on August 12, 2004. Accordingly, Allison was published less than one year before the filing date of the instant application. Therefore, Allison is not a reference under 35 U.S.C. § 102(b), but may be cited under another subsection of 35 U.S.C. § 102.

Secondly, Applicants submit that the term “enriched” is defined in the present application, contrary to the Examiner’s assertions. The Examiner is respectfully directed to page 11, lines 18-27, in the originally filed application, which provides a definition for the word

“enriched” in relation to metal salt concentration. Specifically, the instant application states on page 11, lines 18-27 that “the medium enriched in a metal salt means a medium containing a metal salt at a high concentration relative to the concentrations of the metal salt in basal media...such as N6 basal medium, MS (LS) basal medium...” Further, the Examiner acknowledges that copper concentration is sufficiently identified by way of comparison to a basal medium. On page 4, second paragraph, of the Official Action, the Examiner states that “Allison et al. often expresses the copper concentration by comparison to MS medium.” Based upon the foregoing, the present application clearly provides a definition for the word “enriched.” Accordingly, the term should not be interpreted to mean “any copper concentration greater than zero.”

Applicants further submit that Allison does not teach all of the elements of the instant claims. As amended, independent claim 1 is directed to a method for Agrobacterium-mediated gene transduction into a plant material, comprising: 1) preparing the plant material, and then 2) infecting the plant material with an Agrobacterium, characterized in that a medium enriched in a metal salt containing copper ion is used at least in step 2).

Independent claim 15, as amended, is directed to a process for preparing a transformed plant by Agrobacterium-mediated transformation of a plant material, comprising: 1) preparing the plant material, 2) infecting the plant material with an Agrobacterium, 3) selecting a transformed cell, and 4) regenerating the selected transformant, characterized in that a medium enriched in a metal salt containing copper ion is used in step 2) and step 4).

New independent claim 25 is directed to a method for Agrobacterium-mediated gene transduction into a plant material, comprising: 1) preparing the plant material, and then 2) infecting the plant material with an Agrobacterium, 3) selecting a transformed cell, and 4) regenerating the selected transformant, characterized in that a medium enriched in a metal salt containing a copper ion is used in steps 2) and 4).

New independent claim 26 is directed to a method for Agrobacterium-mediated gene transduction into a plant material, comprising: 1) preparing the plant material, and then 2) infecting the plant material with an Agrobacterium, 3) selecting a transformed cell, and 4) regenerating the selected transformant, characterized in that a medium enriched in a metal salt

containing copper ion is used in step 2).

In contrast to the instant claims, Allison does not describe the use of a medium enriched with a metal salt containing copper ion in step 2, *i.e.*, the step of infecting the plant material with *Agrobacterium*. The Examiner is respectfully directed to column 7, lines 43-46 of Allison, which states that “suitable inoculation media of the present inventions include, but are not limited to, 1/10 MS salts in CM4C media or a modified CM4C culture medium with a reduced salt concentration.” Accordingly, in contrast to the Examiner’s assertions, Allison teaches the use of a medium with a reduced salt concentration for use in the infecting step, not a medium “enriched” in a metal salt containing copper ion, as defined above, and specified in the instant claims.

Accordingly, Allison does not describe all of the elements of the independent claims or the dependent claims, which incorporate these elements. That is, Allison, at least, does not describe the use of a medium enriched in a metal salt containing copper ion, in the step of infecting the plant material with an *Agrobacterium*, (claims 15, 25, and 26), or at least in the step of infecting the plant material with an *Agrobacterium*, (claim 1). Based upon the foregoing, the claims are not anticipated by Allison and Applicants respectfully request withdrawal of the rejection.

Issues Under 35 U.S.C. § 103(a)

Claims 1-21, 23, and 24 are rejected under 35 U.S.C. § 103(a) as allegedly obvious over Allison in view of U.S. Patent No. 6,162,965 to Hansen, (“Hansen”), *see Office Action*, pages 4-6. The Examiner states that Allison teaches the elements described in claims 1-6, 8-21, 23 and 24, *see Office Action*, page 5. The Examiner admits that Allison does not teach additional treatments of pressurization, heat, centrifugation, and/or sonication, *see Office Action*, page 5. However, the Examiner states that these treatments are described by Hansen, *see Office Action*, page 5. The Examiner further states that an ordinary artisan is motivated to combine the cited references because Hansen teaches that heat shock treatments are beneficial for treated plant tissues, *see Office Action*, pages 5-6. Applicants respectfully traverse.

As noted above, Allison fails to teach all of the elements of the independent claims. Hansen does not remedy the deficiencies of Allison. Hansen is merely cited for teaching the use of heat treatment in preparing maize plant material for Agrobacterium infection. Accordingly, none of the cited references, either alone or in combination, teach or suggest the use of a medium enriched in a metal salt containing copper ion, in the step of infecting the plant material with an Agrobacterium (claims 15, 25, and 26) or, at least, in the step of infecting the plant material with an Agrobacterium (claim 1).

Further, Allison teaches away from the instant claims. As noted above, Allison teaches that suitable inoculation media includes 1/10MS salts in CM4C media or a modified CM4C culture medium with a reduced salt concentration. Accordingly, Allison indicates that a medium with a reduced salt concentration should be used in the infecting step. Accordingly, an ordinary artisan would have been discouraged and taught away by Allison from using a medium enriched with a metal salt containing copper as an inoculation medium, as specified in the instant claims.

Based upon the foregoing, the claims are not rendered obvious by the cited references. Accordingly, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

In view of the above amendments and remarks, Applicants submit that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Linda T. Parker, Reg. No. 46,046, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Dated:

APR 30 2009

Respectfully submitted,

By

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